In the Specification

The following is a marked-up version of the specification with the language that is underlined ("___") being added and the language that contains strikethrough ("——") being deleted:

Page 1, lines 1 through 4.

SCORING OF BOUND SHEETS IN IMAGING SYSTEMS

CROSS-REFERENCE TO RELATED APPLICATION

This application is a continuation of copending U.S. utility application entitled, "Scoring of Bound Sheets in Imaging Systems," having ser. no. 09/717,488, filed August 20, 2000, which is entirely incorporated herein by reference.

Page 4, line 15 through page 5, line 12.

An imaging system 10 in accordance with the principles of the present invention is shown in FIG. 1. The imaging system 10 can be, for example, a copier, fax machine, or printer, such as a HEWLETT-PACKARD 5SI. The imaging system 10 can include a magazine 12 adapted to hold a plurality various sizes and types of sheet material. Sheet material from the magazine 12 can be fed into an imaging mechanism 14, where an image is transferred to the sheet material When the imaging system 10 is used to produce multiple-page documents, imaged sheets are collected in order at an accumulator 16. As will be appreciated by those of skill in the art, various transport mechanisms in the imaging system 10 can be used to deliver the desired sheet (cover or fill, etc.) ~~To~~ to the appropriate section for processing. Once the document is complete, it is delivered to an outfeed section 18.

The accumulator 16 is adapted and constructed to accommodate a binding system 20 as illustrated in FIGS. 2 and 3. The binding system 20 includes a binding assembly 22 that includes a frame assembly 24 having a first frame member 26 mounted generally parallel to a second frame member 28. A heating element 30, preferably a relatively thermally low-mass resistive heating element, can be mounted on a lower surface 32 of the frame assembly 24.

The binding assembly 22 includes a cooling element 34 having a generally parallelepipedal lower portion 36 extending downwardly from a generally parallelepipedal upper portion 38. The cooling element 34 can be a passive element such as a heat sink, or actively cooled such as by internal coolant circulation. The lower portion 36 of the cooling element is mounted for reciprocal movement between the first frame member 26 and the second frame member 28 of the frame assembly 24. At least one biasing member, here illustrated as a plurality of coil springs 40, can be secured between at least one of the frame members 26, 28 of the frame assembly 24 and the upper portion 38 of the cooling element 34.

Page 6, line 28 through page 7, line 11.

The process described in conjunction with FIGS. 7 through 10 is repeated until, as shown in FIG. ~~10~~ 11, all pages of the document D1 have been scored and bound together. The document D1 includes the cover C1 and fill sheets F1 through FN. A second cover sheet C1 is received in the accumulator 16, and the heating element 30 is pre-heated to its operating temperature. As shown in FIG. 11, the binding system 20 is moved downwardly until the heating element 30 contacts the surface of the cover C2 in an area above the adhesive AN, melting the adhesive and forming a bond between the sheet FN and the cover C2. As the binding system 20 continues its downward travel, the heating element 30 is deactivated, and the cooling element 34 contacts the surface of the cover C2 in an area above the adhesive A, cooling and completing the bond. Simultaneously, the scoring member 42 presses into the surface of the cover C2, forming a score pattern 54 substantially parallel to a longitudinal edge of the cover C2 and overlying the score pattern on the sheet FN. The system 20 is then lifted its FIG. 14 position, enabling the completed document D1 to be transported to the outfeed section 18.

Page 7, lines 18 through 24.

In the illustrated example, all of the sheets, including the covers, are scored during the binding process. This protects the binding, since the score patterns distribute peeling forces along their length, preventing ~~tem~~ them from reaching and weakening the bond between the sheets of material. This allows heavier covers and fill sheet material to be used than would otherwise be practical with known binding techniques, increasing the perceived quality of the document.